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ABSTRACT

The standard is used to grade nonsupervisor's work involved in blocking, bracing, staying, and securing cargo for shipment by land, sea, or air. It requires skill in constructing, placing, and installing wooden blocks, wedges, bracing structures and other staying devices, as well as skill in securing items using wires, ropes, chains, cables, plates, and other hardware. Two grade levels, WG-7 and WG-8, are differentiated in the description of job duties, skill and knowledge required, area of responsibility, physical effort required, and the working conditions. (Author/AG)

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JOB GRADING STANDARD FOR

BLOCKER AND BRACER

WG-4602

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WORK COVERED

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WORK NOT COVERED

The following kinds of work are not covered by this standard:

—Constructing, altering, and repairing buildings, and related carpentry work. (See Carpenter, WG–4607.)
—Making wooden boxes, crates, and containers. (See Wood Worker, WG–4604.)
—Work limited to prefabricating blocks, wedges, braces, and other wooden staying items. (See Wood Worker, WG–4604.)
—Packing and repacking items in containers, and labeling containers. (See Packer, WG–7002.)
—Applying preservative materials to items for storage and shipment. (See Packing and Processing Family, WG–7000.)
—Making cardboard boxes. (See Carton and Box Making Operating Series, WG–5435.)
—Rigging and moving objects, using equipment such as chainfalls, gin poles, tackle blocks and gallows frames. (See Rigger, WG–5210.)

TITLES

Jobs graded by this standard are to be titled Blocker and Bracer.

GRADE LEVELS

This standard describes two grade levels: WG–7 and WG–8. It does not describe all possible grade levels for this occupation. Jobs which differ substantially from the skill, knowledge, and other work requirements at the grade levels described in this standard may be graded at

levels other than those described based on the application of sound job-grading methods.

Duties: The WG–7 Blocker and Bracer typically secures cargo such as that described below inside or upon conveyances which have regular, rectangular, unobstructed cargo areas. Typical work assignments at this level include the following:

—Constructs and installs wooden blocks, wedges, gates, braces, and other staying devices to separate and secure crated and boxed items inside or upon box cars, gondolas, flat cars, vans, trucks, or other conveyances which have level floors, straight sides, and no odd-shaped or curved overhead areas, framework, or obstacles protruding into the cargo area; cargo may include boxed munitions and stable, standard, containerized items; and

—Ties down, guys, blocks, and secures cargo such as passenger cars, trucks, jeeps, small combat and engineering or construction vehicles, and similar, regularly transported items, using cables, chains, wires, ropes, chocks, cleats, pneumatic dunnage, axle braces, turnbuckles, and clamps.

The WG–7 Blocker and Bracer follows existing instructions and work practices. He determines necessary sizes for braces, wedges, cables, and other staying devices by measuring or estimating them before and during construction or installation, and he insures that cargo is sufficiently secure for the type of transportation involved. He may also band accessories and place labels, directions, or handling instructions on items. His work is checked for compliance with regulations, guidelines, and instructions.

Skill and Knowledge: In blocking, bracing, and securing cargo, as described above, the WG–7 Blocker and Bracer:

—Applies a knowledge of frequently used agency regulations or practices covering standard, routine blocking and bracing procedures in planning the type and placement of blocks, wedges, shims, bracing structures, guying, and other staying devices;

—Applies a knowledge of the uses of various kinds, sizes, and amounts of materials and hardware (e.g., lumber, cables, straps, turnbuckles, anchor plates, rope, and chain), and is able to identify and select the appropriate items;

—Applies skill in measuring areas to determine sizes of blocking and bracing materials and structures, using rulers, tapes, squares, etc.; and applies skill in estimating sizes for similar items;

—Applies skill in cutting to proper size and angle, fitting, and securely installing blocks, wedges, and parts for wooden bracing structures, using hand and portable power saws, pneumatic nailing guns, impact wrenches, jacks, hammers, sledge hammers, and fastening devices such as spikes, nails, and bolts;

—Applies skill in guying, lashing, tieing down, and securing items with cable, chain, steel straps, wire, rope, bolts, etc., using turnbuckles, crimpers, cable stretchers, wrenches, and bars;

—Applies knowledge of designs for, and skill in constructing, a variety of bracing items and structures of standard, common design, such as cross braces, "K" braces, car gates, "A" frames, rectangular false floors, and similar items inside conveyances which have straight walls, level floors, and unobstructed interiors; and

—Applies the ability to add and subtract in computing lengths and widths of bracing and guying items, and in adding weights to determine the best placement of cargo.

Responsibility: The WG–7 Blocker and Bracer follows guidelines, instructions, and existing work practices which indicate the work location, type, and amount of cargo to be secured, and general type and placement of blocks, braces, wires, chains, cables, or other staying devices. Most work is similar to previous recurring assignments. Nonroutine work assignments typically include onsite guidance and direction.

The WG–7 Blocker and Bracer uses judgment in insuring that individual parts, structures, and devices installed will prevent cargo movement and damage, considering the type, weight, and placement of the load. His work is checked for compliance with regulations and instructions and to insure that cargo is sufficiently secure for the planned transportation.

Physical Effort: The WG–7 Blocker and Bracer performs heavy, strenuous, tiring work for prolonged periods. He continuously lifts, carries, and positions tools and materials weighing up to 45 pounds, and often moves or positions extremely heavy items using jacks, levers, or assistance from other workers. His work continuously involves

standing, stooping, reaching, or similar physical activity. He sometimes works in cramped or awkward positions and may have to climb upon or crawl under vehicles or structures.

Working Conditions: The WG–7 Blocker and Bracer works both inside and outside and is frequently exposed to disagreeable heat, coldness, dampness, wind and rain.

The WG–7 Blocker and Bracer is frequently exposed to noise and to possible cuts, abrasions, and splinters from power sawing, handling lumber, spiking, nailing, and other work. He is exposed to nose and lung irritation from dust and sawdust. He is sometimes exposed to possible injuries from falling objects, swinging crane loads, etc.

To avoid injuries, the WG–7 Blocker and Bracer may wear protective eyeglasses, a face shield, protective ear devices, gloves, hard hats, hard toe shoes, or other protective equipment.

Duties: The WG–8 Blocker and Bracer secures freight such as heavy, unbalanced machinery, vehicles, and equipment; artillery; odd-shaped containers; large explosive bombs, rockets, and missiles; sensitive electronic equipment; and similar cargo in a variety of conveyances such as ships, aircraft, vans, gondola cars, box cars, and barges. The following assignments are typical of the WG–8 level:

—Installs blocking and bracing against nonrectangular, irregular, slanted, sloped, or curved walls, floors, sides, overhead areas, etc.;
—Installs blocking and bracing around obstacles such as columns, plumbing, or other utility fixtures; and protruding structural framework such as web frames;
—Makes, fits, and installs wooden bracing to secure odd-shaped boxes and crates, vehicles and craft, large bombs or missiles, or sensitive unsheathed equipment to withstand severe stress such as that which results from storm-caused tossing at sea;
—Blocks and braces, and secures uncrated, uncontainerized equipment which is sensitive, hazardous, or unusually large or heavy, and is frequently unbalanced or fragile;
—Builds temporary trestles, false floors, decking, bulkheads, and cribbing in odd-shaped cargo areas or around obstacles; custom-makes and places large saddles, cradles, and supports in conveyances.

The WG–8 Blocker and Bracer determines best work methods and materials for securing items to prevent shifting or damage; this requires a knowledge of regulations, agency guidelines, and standard work procedures.

The WG–8 Blocker and Bracer's work is spot checked for compliance with regulations.

Skill and Knowledge: In accomplishing the blocking and bracing described above, the WG–8 Blocker and Bracer:

—Applies a knowledge of how a variety of different kinds, sizes, shapes, weights, etc., of cargo tend to move, shift or break loose during transport by ship, aircraft, barge, truck, van, railroad car, or barge; knowledge of preferred arrangement of cargo and distribution of weight; and skill in estimating the center of gravity and general weight of items to determine how and where to brace, place, separate, support, and secure cargo to prevent shifting and damage;

—Applies a knowledge of a variety of blocking and bracing regulations issued by different agencies, such as the Interstate Commerce Commission, the American Association of Railroads, the Department of Transportation, and one or more military agencies;

—Applies the ability to read and work from plans, written instructions, sketches, blueprints, or drawings, which indicate special, unusual, or mandatory location or placement of cargo or staying devices; structural features of conveyances; or special design or installation requirements for guying, bracing, and staying;

—Applies the ability to measure and miter lumber by using squares, miter boxes, rulers, and tapes, or by estimating the appropriate angles and sizes, along with skill in using portable power saws and drills, to cut and make angular, curved, or odd-shaped parts, and secure joints;

—Applies skill in guying, lashing, strapping, and securing heavy, delicate, odd-shaped or unbalanced cargo, using straps, cables, rope, bands, wire, etc., in conjunction with rings, eyelets, hooks, turnbuckles, cleats, stanchions, plates, and other hardware and fixtures;

—Applies skill in the use of levers, jacks, crimpers, sledge hammers, impact wrenches, strapping tools, cable stretchers, and similar tools;

—Applies the ability to add, subtract, multiply, and divide in computing sizes, weights, and quantities of parts, materials, and cargo; and

—Knows how to install intermediate positions or bracing boundaries in large cargo areas, to prevent chain-series or overall loosening, or failure of wedging and bracing, due to failure at one support point.

Responsibility: The WG–8 Blocker and Bracer works from general instructions which indicate the work location, type, and amount of cargo to be secured, the agencies whose requirements must be met, and any unusual or hidden hazards, cargo features, or requirements. He uses judgment in planning and selecting the appropriate kind, size, and type of blocking and bracing materials, the proper work methods, and the most efficient work sequences to perform the assigned work. He is responsible for selecting and using methods and materials which meet the requirements of the designated Government agencies. His work is checked for compliance with regulations and to insure that

cargo will remain secure during the planned shipment by land, air, or sea.

Physical Effort and Working Conditions: Physical effort and working conditions of the WG–8 Blocker and Bracer are essentially the same as those described for the WG–7 Blocker and Bracer.

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